Package 'jmvcore'

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Type Package

Title Dependencies for the 'jamovi' Framework

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Description A framework for creating rich interactive analyses for the jamovi platform (see <https://www.jamovi.org> for more information).

URL https://www.jamovi.org

BugReports https://github.com/jamovi/jmvcore/issues

License GPL (>= 2)

ByteCompile yes

Depends R (>= 3.2)

Imports R6 (>= 1.0.1), rlang (>= 0.3.0.1), jsonlite, base64enc, stringi

Suggests testthat (>= 1.0.2), RProtoBuf, knitr, ggplot2, RColorBrewer, ragg, fastmap

RoxygenNote 6.1.1

NeedsCompilation no

Repository CRAN

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R topics documented:

`Analysis` *the jmvcore Object classes*

Description

the jmvcore Object classes

Usage

```
Analysis

Array

Column

Group

Html

Image
```

Output

Preformatted

State

Table

Format

An object of class R6ClassGenerator of length 25.

---

canBeNumeric *Determines whether an object is or can be converted to numeric*

Description

Determines whether an object is or can be converted to numeric

Usage

```
canBeNumeric(object)
```

Arguments

object	the object

Cell.BEGIN_GROUP *Constants to specify formatting of Table cells*

Description

Cell.BEGIN_GROUP adds spacing above a cell

Usage

Cell.BEGIN_GROUP

Cell.END_GROUP

Cell.BEGIN_END_GROUP

Cell.NEGATIVE

Cell.INDENTED

Format

An object of class `numeric` of length 1.

Details

Cell.END_GROUP add spacing below a cell

Cell.BEGIN_END_GROUP add spacing above and below a cell

Cell.NEGATIVE specifies that the cells contents is negative

Examples

```
## Not run:

table$addFormat(rowNo=1, col=1, Cell.BEGIN_END_GROUP)

## End(Not run)
```

`colorPalette` *A function that creates a color palette*

Description

A function that creates a color palette

Usage

```
colorPalette(n = 5, pal = "jmv", type = "fill")
```

Arguments

`n`	Number of colors needed
`pal`	Color palette name
`type`	'fill' or 'color'

Value

a vector of hex color codes

composeFormula *Compose a formula string*

Description

Compose a formula string

Usage

```
composeFormula(lht, rht)
```

Arguments

lht	list of character vectors making up the left
rht	list of character vectors making up the right

Value

a string representation of the formula

Examples

```
composeFormula(list('a', 'b', c('a', 'b')))
# ~a+b+a:b

composeFormula('f', list('a', 'b', c('a', 'b')))
# "f~a+b+a:b"

composeFormula('with spaces', list('a', 'b', c('a', 'b')))
'`with spaces`~a+b+a:b'
```

composeTerm *Compose and decompose interaction terms to and from their components*

Description

Compose and decompose interaction terms to and from their components

Usage

```
composeTerm(components)

composeTerms(listOfComponents)

decomposeTerm(term)

decomposeTerms(terms)
```

Arguments

components	a character vectors of components
listOfComponents	a list of character vectors of components
term	a string with components separated with colons
terms	a character vector of components separated with colons

Examples

```
composeTerm(c('a', 'b', 'c'))
# 'a:b:c'

composeTerm(c('a', 'b', 'with space'))
# 'a:b:`with space`'

decomposeTerm('a:b:c')
# c('a', 'b', 'c')

decomposeTerm('a:b:`with space`')
# c('a', 'b', 'with space')
```

---

constructFormula *Construct a formula string*

Description

Construct a formula string

Usage

```
constructFormula(dep = NULL, terms)
```

Arguments

dep	the name of the dependent variable
terms	list of character vectors making up the terms

Value

a string representation of the formula

Examples

```
constructFormula(terms=list('a', 'b', c('a', 'b')))
# a+b+a:b

constructFormula('f', list('a', 'b', c('a', 'b')))
# "f~a+b+a:b"

constructFormula('with spaces', list('a', 'b', c('a', 'b')))
'`with spaces`~a+b+a:b'
```

---

create *Create an analysis*

Description

Used internally by jamovi

Usage

```
create(ns, name, optionsPB, datasetId, analysisId, revision)
```

Arguments

ns	package name
name	analysis name
optionsPB	options protobuf object
datasetId	dataset id
analysisId	analysis id
revision	revision

createError *Create and throw errors*

Description

These functions are convenience functions for creating and throwing errors.

Usage

```
createError(formats, code = NULL, ...)

reject(formats, code = NULL, ...)
```

Arguments

formats	a format string which is passed to format
code	an error code
...	additional arguments passed to format

decomposeFormula *Decompose a formula*

Description

Decompose a formula

Usage

```
decomposeFormula(formula)
```

Arguments

formula	the formula to decompose

Value

a list of lists of the formulas components

extractErrorMessage *Extracts the error message from an error object*

Description

Extracts the error message from an error object

Usage

```
extractErrorMessage(error)
```

Arguments

error	an error object

format *Format a string with arguments*

Description

Substitutes the arguments into the argument str. See the examples below.

Usage

```
format(str, ..., context = "normal")
```

Arguments

str	the format string
...	the arguments to substitute into the string
context	'normal' or 'R'

Value

the resultant string

Examples

```
jmvcore::format('the {} was delish', 'fish')

# 'the fish was delish'

jmvcore::format('the {} was more delish than the {}', 'fish', 'cow')

# 'the fish was more delish than the cow'
```

```
jmvcore::format('the {1} was more delish than the {0}', 'fish', 'cow')

# 'the cow was more delish than the fish'

jmvcore::format('the {what} and the {which}', which='fish', what='cow')

# 'the cow and the fish'

jmvcore::format('that is simply not {}', TRUE)

# 'that is simply not true'

jmvcore::format('that is simply not {}', TRUE, context='R')

# 'that is simply not TRUE'
```

---

isError *Determine if an object is an error*

Description

Determine if an object is an error

Usage

```
isError(object)
```

Arguments

object	the object to test

Value

TRUE if the object is an error

---

marshalData *Marshal the data from an environment into a data frame*

Description

Marshal the data from an environment into a data frame

Usage

```
marshalData(env, ...)
```

Arguments

env	the environment to marshal from
...	the variables to marshal

Value

a data frame

---

marshalFormula *Marshal a formula into options*

Description

Marshal a formula into options

Usage

```
marshalFormula(formula, data, from = "rhs", type = "vars",
  permitted = c("numeric", "factor"), subset = ":", required = FALSE)
```

Arguments

formula	the formula
data	a data frame to marshal the data from
from	'rhs' or 'lhs', which side of the formula should be marshalled
type	'vars' or 'terms', the type of the option be marshalled to
permitted	the types of data the option permits
subset	a subset of the formula to marshal
required	whether this marshall is required or not

---

matchSet *Determines the index where an item appears*

Description

Determines the index where an item appears

Usage

```
matchSet(x, table)
```

Arguments

x	the item to find
table	the object to search

Value

the index of where the item appears, or -1 if it isn't present

---

naOmit *remove missing values from a data frame listwise*

Description

removes all rows from the data frame which contain missing values (NA)

Usage

```
naOmit(object)
```

Arguments

object	the object to remove missing values from

Details

this function is equivalent to na.omit from the stats package, however it preserves attributes on columns in data frames

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Options *The jmv Options classes*

Description

The jmv Options classes

Usage

```
Options

OptionBool

OptionList

OptionNMXList
```

OptionVariables

OptionTerm

OptionVariable

OptionOutput

OptionTerms

OptionInteger

OptionNumber

OptionString

OptionLevel

OptionGroup

OptionPair

OptionSort

OptionArray

OptionPairs

Format

An object of class R6ClassGenerator of length 25.

---

resolveQuo *Evaluates a quosure This is intended for use by classes overriding Analysis*

Description

Evaluates a quosure This is intended for use by classes overriding Analysis

Usage

```
resolveQuo(quo)
```

Arguments

quo	the quosure to evaluate

Value

the value of the quosure

`select` *Create a new data frame with only the selected columns*

Description

Shorthand equivalent to `subset(df, select=columnNames)`, however it additionally preserves attributes on the columns

Usage

```
select(df, columnNames)
```

Arguments

`df`	the data frame
`columnNames`	the names of the columns to make up the new data frame

Value

the new data frame

`sourcify` *Converts basic R object into their source representation*

Description

Converts basic R object into their source representation

Usage

```
sourcify(object, indent = "")
```

Arguments

`object`	the object to convert to source
`indent`	the level of indentation to use

Value

a string of the equivalent source code

Examples

```
sourcify(NULL)

# 'NULL'

sourcify(c(1,2,3))

# 'c(1,2,3)'

l <- list(a=7)
l[['b']] <- 3
l[['c']] <- list(d=3, e=4)
sourcify(l)

# 'list(
#      a=7,
#      b=3,
#      c=list(
#          d=3,
#          e=4))'
```

`startsWith` *Test whether strings start or end with a particular string*

Description

Same as `base::startsWith()` and `base::endsWith()` except available for R < 3.3

Usage

```
startsWith(x, prefix)

endsWith(x, suffix)
```

Arguments

`x`	a string to test
`prefix`	a string to test the presence of
`suffix`	a string to test the presence of

`stringifyTerm` *Converts a term into a string*

Description

Converts a term (a vector of components) into a string for display purposes

Usage

```
stringifyTerm(components, sep = getOption("jmvTermSep", ":"),
  raise = FALSE)
```

Arguments

`components`	a character vector of components
`sep`	a separator to go between the components
`raise`	whether duplicates should be raised to powers

Value

the components joined together into a string for disply

Examples

```
stringifyTerm(c('a', 'b', 'c'))

# "a:b:c"

stringifyTerm(c('a', 'b', 'c'), sep=' * ')

# "a * b * c"

options('jmvTermSep', ' * ')
stringifyTerm(c('a', 'b', 'c'))

# "a * b * c"

#' stringifyTerm(c('`quoted`', 'b', 'c'))

# "quoted * b * c"
```

theme_default *Creates the default jmv ggplot2 theme*

Description

Creates the default jmv ggplot2 theme

Usage

```
theme_default(base_size = 16, scale = "none", palette = "jmv")
```

Arguments

base_size	Font size
scale	'none' or 'discrete'
palette	Color palette name

Value

the default jmv ggplot2 theme

theme_hadley *Creates the hadley jmv ggplot2 theme*

Description

Creates the hadley jmv ggplot2 theme

Usage

```
theme_hadley(base_size = 16, scale = "none", palette = "jmv")
```

Arguments

base_size	Font size
scale	'none' or 'discrete'
palette	Color palette name

Value

the hadley jmv ggplot2 theme

theme_min *Creates the minimal jmv ggplot2 theme*

Description

Creates the minimal jmv ggplot2 theme

Usage

```
theme_min(base_size = 16, scale = "none", palette = "jmv")
```

Arguments

base_size	Font size
scale	'none' or 'discrete'
palette	Color palette name

Value

the minimal jmv ggplot2 theme

theme_spss *Creates the spss jmv ggplot2 theme*

Description

Creates the spss jmv ggplot2 theme

Usage

```
theme_spss(base_size = 16, scale = "none", palette = "jmv")
```

Arguments

base_size	Font size
scale	'none' or 'discrete'
palette	Color palette name

Value

the spss jmv ggplot2 theme

toB64 *Convert names to and from Base64 encoding*

Description

Note: uses the . and _ characters rather than + and / allowing these to be used as variable names

Usage

```
toB64(names)

fromB64(names)
```

Arguments

names	the names to be converted base64

toNumeric *Converts a vector of values to numeric*

Description

Similar to as.numeric, however if the object has a values attribute attached, these are used as the numeric values

Usage

```
toNumeric(object)
```

Arguments

object	the vector to convert

`tryNaN` *try an expression, and return NaN on failure*

Description

if the expression fails, NaN is returned silently

Usage

```
tryNaN(expr)
```

Arguments

`expr`	an expression to evaluate

Value

the result, or NaN on failure

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